

In re Patent Application of
BERTRAND ET AL.
Serial No. 10/813,564
Filed: MARCH 30, 2004

REMARKS

Applicants appreciate the Examiner's careful and thorough examination of the present application. By this amendment, Claims 12, 23 and 33 have been amended to clarify the present invention. Claims 12, 13, 16-23, 26-33 and 36-42 remain pending in the application. Favorable reconsideration is respectfully requested.

I. The Invention

As shown in FIG. 3, for example, the invention is directed to a trigger whose hysteresis is not sensitive to the power supply potential VDD of the trigger and to temperature. The invention also provides a trigger whose hysteresis is high for low values of the power supply potential. This is provided by a comparator with two thresholds comprising a two-threshold latch of which one input and one output respectively form an input and an output of the comparator. The comparator at least includes a negative feedback loop acting on a first node for setting a first threshold of the comparator as a function of a first power supply potential applied to the first power supply terminal, and as a function of a first reference potential. The first threshold is an upper threshold, and the first reference potential is less than or equal to the first power supply potential, which is positive. Also, the difference between the first power supply potential and the first reference potential is positive and increases as a function of the first power supply potential to limit an

In re Patent Application of
BERTRAND ET AL.
Serial No. 10/813,564
Filed: MARCH 30, 2004

increase in the first threshold when the first power supply potential increases.

II. The Claims are Patentable

Claims 12, 13, 16-23, 26-33 and 36-42 were again rejected in view of Naura (U.S. 6,127,898) for the reasons set forth on pages 2-4 of the final Office Action. As noted above, Claims 12, 23 and 33 have been amended. Applicants contend that Claims 12, 13, 16-23, 26-33 and 36-42 clearly define over the cited reference, and in view of the following remarks, favorable reconsideration of the rejection under 35 U.S.C. §102 is requested.

The independent Claims 12, 23 and 33 now recite that a difference between the first power supply potential and the first reference potential is positive and increases as a function of the first power supply potential to limit an increase in the first threshold when the first power supply potential increases. Support for this amendment may be found in the specification at paragraph Nos. [0016] and [0019] for example. In other words, the voltage reference VREF1 is chose to adjust the value of the threshold VH.

The Examiner has relied on the Naura patent (to the same assignee of record) as allegedly disclosing each and every feature of the claimed invention. The Naura patent is directed to a ring oscillator using CMOS technology having three logic gates, including a threshold amplifier, where the transistors that set the voltage rise threshold and the voltage drop threshold in the amplifier are controlled by a

In re Patent Application of
BERTRAND ET AL.

Serial No. 10/813,564

Filed: MARCH 30, 2004

bias control circuit so that the ratio of voltage rise threshold to the voltage supply diminishes and the ratio of the voltage drop threshold to the voltage supply increases, when the supply voltage supply falls. The Examiner refers specifically to the circuit illustrated in FIG. 5 of Naura as meeting the features of the claimed invention.

As argued in the previous response, the Examiner has misinterpreted the cited reference. Specifically, Applicants note that the Naura circuit has the effect of raising the ratio V_b/V_{dd} of the threshold at a drop in voltage (or voltage drop threshold) to the level V_{dd} of the supply voltage and of reducing the ratio V_b/V_{dd} of the threshold at a rise in voltage (or voltage rise threshold) to the level V_{dd} of the supply voltage when this level V_{dd} diminishes (see Naura Col. 4, lines 15-22, for example). In this way, the difference $V_h - V_b$ gets reduced when the supply voltage falls. Indeed, there is no teaching of the difference between the first power supply potential and the first reference potential being positive and increasing as a function of the first power supply potential to limit an increase in the first threshold when the first power supply potential increases, as claimed.

In response to this argument, the Examiner referred to Fig. 6 of Naura to show that V_{DD} is 5 volts, and column 5, lines 30-40 to allegedly teach that " V_{ref1} is 1 volt constant." Again, Applicants emphasize that the Examiner has mischaracterized the actual teachings of the reference. Applicants point out that some similar terminology between the present application and the Naura reference regarding the

In re Patent Application of
BERTRAND ET AL.
Serial No. 10/813,564
Filed: MARCH 30, 2004

first and second reference potentials may be causing some confusion with the Examiner. Specifically, the reference VREF1 in the present invention corresponds to VREF2 in Naura, and VREF2 in the present invention corresponds to VREF1 in Naura, as can be seen by comparing Figure 3 of the present application and Figures 3, 5 in Naura. For example, in Naura, the first threshold V_h is set as a function of the first power supply potential V_{dd} (via T6) and as a function of the reference potential Vref2.

Also, in Naura, col. 5, lines 30-40 (as specifically relied upon by the Examiner), it is merely explained that Vref2 (corresponding to Vref1 in the present application) is stable, independent of the process. It is not explained that Vref2 is constant. On the contrary, Vref2 is chosen to be equal to V_{DD} minus a constant, and so it may be assumed that Vref is variable and not constant.

As the Examiner is aware, a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. The identical invention must be shown in as complete detail as is contained in the claim.

There is simply no teaching or suggestion in the cited reference to provide the combination of features as claimed. Accordingly, for at least the reasons given above, Applicants maintain that the cited reference does not disclose or fairly suggest the invention as set forth in Claims 12, 23 and 33. Thus, the rejection under 35 U.S.C. §102(b) should be withdrawn.

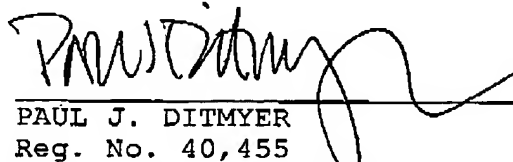
In re Patent Application of
BERTRAND ET AL.
Serial No. 10/813,564
Filed: **MARCH 30, 2004**

It is submitted that the independent claims are patentable over the prior art. In view of the patentability of the independent claims, it is submitted that their dependent claims, which recite yet further distinguishing features are also patentable over the cited references for at least the reasons set forth above. Accordingly, these dependent claims require no further discussion herein.

III. Conclusion

In view of the foregoing remarks, it is respectfully submitted that the present application is in condition for allowance. An early notice thereof is earnestly solicited. If, after reviewing this Response, there are any remaining informalities which need to be resolved before the application can be passed to issue, the Examiner is invited and respectfully requested to contact the undersigned by telephone to resolve such informalities.

Respectfully submitted,

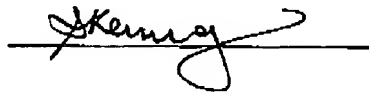


PAUL J. DITMYER
Reg. No. 40,455
Allen, Dyer, Doppelt, Milbrath
& Gilchrist, P.A.
255 S. Orange Avenue, Suite 1401
Post Office Box 3791
Orlando, Florida 32802
407-841-2330
Attorney for Applicants

In re Patent Application of
BERTRAND ET AL.
Serial No. 10/813,564
Filed: **MARCH 30, 2004**

CERTIFICATE OF FACSIMILE TRANSMISSION

I HEREBY CERTIFY that the foregoing correspondence has been forwarded via facsimile number 571-273-8300 to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 this 10th day of April, 2006.



BEST AVAILABLE COPY